AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A wheel-hub mountable odometer comprising:

an accelerometer comprising sensor means for sensing force, wherein the sensor means are operable to sense a force acting thereon and generate an electrical signal representative of said force sensed by the sensor means, and wherein the signal is proportional to the number of wheel rotations of the wheel; and

an electronic control system comprising a microcontroller and a power source for interpreting the signal from the accelerometer and calculating wheel rotations;

wherein said microcontroller is programmed with power control means to reduce the power consumed by the electronic system.

2. (cancelled)

3. (original) The odometer of claim 1 wherein the accelerometer comprises a dual axis accelerometer capable of sensing force along two axes.

4. (Currently Amended) The odometer of claim 3, wherein the two ~~axis~~ axes of the accelerometer are offset by 90°.

5. (cancelled)

6. (cancelled)

7. (Currently Amended) The odometer of claim ~~5~~ 1 wherein the electronic control system further comprises electronic filters to attenuate irregularities in the accelerometer signal.

8. (Currently Amended) The odometer of claim 7 wherein the electronic filters comprise an adaptive frequency filter wherein the adaptive frequency is calculated through the use of a digital phase locked loop, and a bandpass filter attenuates irregularities in the accelerometer signal due to wheel impacts.

9. (cancelled)

10. (Currently Amended) The odometer of claim ~~5~~ 1 wherein the odometer further comprises a display in communication with the electronic control system.

11. (Currently Amended) An odometer communications system comprising the odometer of claim ~~5~~ 1 coupled to a communication system operable to communicate odometer information to a remote location.

12. (original) The odometer communications system of claim 11 wherein the communication system further comprises means to communicate instructions to the odometer.

13. (cancelled)

14. (Currently Amended) The odometer communications system of claim ~~13~~ 12 wherein the communication system comprises an infrared ~~IR~~ communication system comprising ~~means comprises~~ an infrared LED and photosensor coupled to the microcontroller.

15. (original) The odometer communications system of claim 11 wherein the communication system comprises an RF communication system.

16. (original) The odometer communications system of claim 15 wherein the RF communication system comprises an interrogator remote from the wheel, and an RF tag in communication with the microcontroller of the odometer.

17. (Currently Amended) The odometer communications system of claim ~~16~~ 35 wherein the RF communication system comprises an active RF system capable of actively transmitting data from the odometer to the remote interrogator.

18. (Currently Amended) The odometer communications system of claim ~~16~~ 35 wherein the RF communication system comprises an RF backscatter communication system.

19. (Currently Amended) The odometer communications system of claim ~~16~~ 35 wherein the interrogator is functionally connected to a wireless network and wherein the odometer data communicated from the odometer to the interrogator is further communicated to the wireless network.

20. (Currently Amended) The odometer communications system of claim ~~16~~ 35 wherein the interrogator is functionally connected to the Internet.

21. (Cancelled)

22. (Currently Amended) A method for counting wheel revolutions comprising:

attaching an electronic accelerometer to a wheel, the accelerometer comprising sensor means for sensing a force acting on the accelerometer and generating an accelerometer signal comprising an electronic signal proportional to the force; and

providing an electronic control system comprising a microcontroller and a power source functionally connected to the accelerometer, comprising means for converting the accelerometer signal into a wheel revolution count;

providing an RF communication system comprising an interrogator remote from the wheel, and an RF tag in communication with the electronic control system;

wherein the signal generated by the accelerometer is sent to the electronic control system which computes odometer data comprising the wheel revolution count based on the signal from the accelerometer, and said RF communication system communicates said odometer data to a remote location.

23. (Currently Amended) The method of claim 22 wherein the accelerometer further comprises a dual axis electronic accelerometer, and said accelerometer senses force along the two axes and generates ~~a~~ electrical signals proportional to the sensed forces.

24. (cancelled)

25. (cancelled)

26. (Currently Amended) The method of claim ~~24~~ 22 wherein the ~~means for communicating odometer data~~ RF communication system is functionally connected to a network, and said odometer data is communicated to the network and available to a plurality of locations through said network.

27. (original) The method of claim 26 wherein the network comprises a wireless network.

28. (original) The method of claim 27 wherein the network comprises the Internet.

29. (New) An odometer communications system for a wheel-hub mountable odometer comprising:

an accelerometer comprising sensor means for sensing force, wherein the sensor means are operable to sense a force acting thereon and generate an electrical signal representative of said force sensed by the sensor means, and wherein the signal is proportional to the number of wheel rotations of the wheel; and

an electronic control system comprising a microcontroller and a power source for interpreting the signal from the accelerometer and calculating wheel rotations;

wherein said accelerometer and electronic control system are coupled to a communication system operable to communicate odometer information to a remote location, and wherein said communication system further comprises means to communicate instructions from a remote location to the odometer.

30. (New) The odometer of claim 29 wherein the electronic control system further comprises electronic filters to attenuate irregularities in the accelerometer signal.

31. (New) The odometer of claim 30 wherein the electronic filters comprise an adaptive frequency filter wherein the adaptive frequency is calculated through the use of a digital phase locked loop, and a bandpass filter attenuates irregularities in the accelerometer signal due to wheel impacts.

32. (New) The odometer communications system of claim 29 wherein the communication system comprises an IR communication system comprising an infrared LED and photosensor coupled to the microcontroller.

33. (New) The odometer communications system of claim 29 wherein the communication system comprises an RF communication system.

34. (New) The odometer communications system of claim 33 wherein the RF communication system comprises an interrogator remote from the wheel, and an RF tag in communication with the microcontroller of the odometer.

35. (New) An odometer communications system for a wheel-hub mountable odometer comprising:

an accelerometer comprising sensor means for sensing force, wherein the sensor means are operable to sense a force acting thereon and generate an electrical signal representative of said force sensed by the sensor means, and wherein the signal is proportional to the number of wheel rotations of the wheel; and

an electronic control system comprising a microcontroller and a power source for interpreting the signal from the accelerometer and calculating wheel rotations;

wherein said accelerometer and electronic control system are coupled to an RF communication system comprising an interrogator remote from the wheel, and an RF tag in communication with the microcontroller of the odometer; and

wherein said communication system is operable to communicate odometer information to a remote location.

36. (New) The odometer of claim 35 wherein the electronic control system further comprises electronic filters to attenuate irregularities in the accelerometer signal.

37. (New) The odometer of claim 36 wherein the electronic filters comprise an adaptive frequency filter wherein the adaptive frequency is calculated through the use of a digital phase locked loop, and a bandpass filter attenuates irregularities in the accelerometer signal due to wheel impacts.

38. (New) The odometer communications system of claim 35 wherein the communication system comprises an IR communication system comprising an infrared LED and photosensor coupled to the microcontroller.